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10/664,147	09/17/2003	Jaime Navarrete	2001.45	4161

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EXAMINER

DOVE, TRACY MAE

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 11/17/2005

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/664,147  
Filing Date: September 17, 2003  
Appellant(s): NAVARRETE, JAIME

**MAILED**

NOV 17 2005

**GROUP 1700**

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/22/05 appealing from the Office action mailed 6/9/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

WO 02/28955 A2

NAVARRETE

4-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Navarrete et al., WO 02/28955 A2. Navarrete teaches a lead acid battery separator comprising a microporous membrane including an ultra-high molecular weight polyethylene (UHMWPE), a filler, a

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processing oil and a lignin (abstract). Grass lignins are disclosed at page 1. The lignin is added to the UHMWPE battery separator to reduce antimony poisoning (top of page 3). The membrane generally comprises about 15-25 wt% UHMWPE, 50-80 wt% filler, 0-25 wt% process oil and 5-20 wt% lignin (top of page 5). The microporous membrane has an average pore size in the range of about 0.1 to about 1.0 micron and a porosity greater than 10% (bottom of page 4). The pore structure is referred to as an open cell structure (top of page 5). The filler may be precipitated silica or oxide compounds (page 5) and the processing oil may be mineral oil, olefinic oil or parafinic oil (top of page 6). Grass lignins may be obtained from rice (straw), corn or sugar cane (bagasse) (page 1). Thus the claims are anticipated.

#### **(10) Response to Argument**

Applicant argues claims 1-7 and 9 are not anticipated by Navarrete because the prior art reference does not teach the “grass lignin” limitation of the claimed invention. Examiner disagrees. At page 1 of the prior art reference a lignin is defined as “a by-product of wood pulping operations” that “is generally accepted to be a three dimensional, crosslinked polymer comprised of three different phenyl propenol moieties”. The reference discusses grass lignins, softwood lignins and hardwood lignins. Thus, Navarrete teaches grass lignins. Examiner now points to claim 1 of the prior art reference that recites “A battery separator for lead acid batteries comprising: a microporous membrane including an ultra high molecular weight polyethylene, a filler, a processing oil, and a lignin.” Claim 2 of the prior art reference recites the “separator of claim 1 wherein said lignins being selected from the group consisting of softwood lignins, hardwood lignins, and mixtures thereof”. In order for claim 2 to be further limiting claim 1, claim 1 must encompass grass lignins. Furthermore, claim 1 broadly claims “a lignin”, which

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encompasses all lignins known at the time of invention of Navarrete. Navarrete clearly teaches grass lignins were known at the time of invention.

Applicant cites various case law on page 6-8 of the Brief. However, the case law is not applicable to the pending application and rejection because a grass lignin is not a “specific compound”. Furthermore, Navarrete teaches a lignin is used in the battery separator and discloses lignin may be from grass, softwood or hardwood sources. Thus, the reference does not require “picking, choosing, and combining various disclosures”. Applicant asserts “the compound disclosed in Navarrete “wood lignins” are not the “grass lignins” of the instant invention”. However, Applicant does not support this assertion. Navarrete teaches a lignin has an extremely complex chemical structure (page 1). There is no support for the assertion that a lignin from a grass source and a lignin from a soft or hardwood source cannot have the same structure. At least page 1 in combination with claim 1 of Navarrete teaches and suggests the claimed invention.

It is important to point out that a grass lignin is not a specific compound. Lignins are a class of compounds that are produced from a grass source, hardwood source or a softwood source. A grass lignin does not inherently teach a specific compound or structure. For example, Navarrete teaches softwood lignins are made up of predominantly coniferyl alcohol alone and grass lignins are comprised predominantly of coumaryl and coniferyl alcohols. Therefore, a lignin can comprise 90% of coniferyl alcohol and 10% of coumaryl alcohol and be considered both a lignin from a grass source and a lignin from a softwood source. Therefore, Applicant’s assertion that lignins from softwood sources are different from lignins from grass sources is not supported and is contrary to the teachings of the prior art.

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Applicant further argues the wood lignins fail to contain any significant amount of coumaryl alcohols. However, grass lignins do not require a significant amount of coumaryl alcohols. The prior art reference teaches grass lignins are comprised predominantly of coumaryl and coniferyl alcohols, but discloses nothing about the relative amounts of the coumaryl and coniferyl alcohols in the lignin produced from the grass source.

Applicant further argues Examiner's position the "grass" is a product-by-process limitation is incorrect. However, a grass lignin is defined as a lignin produced from a grass source. The prior art teaches a separator comprising a lignin. The fact that the lignin of the claimed invention is produced from a grass source is a product-by-process limitation. Applicant must show that a lignin produced from a grass source is necessarily structurally different from a lignin produced from a softwood or hardwood source. The prior art reference only describes general differences between lignins produced from different sources. The reference does not "clearly define" or "clearly explain" how the lignins are different chemically/structurally. Referring to the example above, is a lignin comprised of 90% of coniferyl alcohol and 10% of coumaryl alcohol considered a lignin from a grass source or a lignin from a softwood source? In the example the lignin is "comprised predominantly of coumaryl and coniferyl alcohols" (grass) and the lignin is "made up of predominantly coniferyl alcohol alone" (softwood). Therefore, the claim limitation "grass lignin" does not impart distinctive structural characteristics to the final product as asserted by Applicant.

Applicant states the grass lignin acts as an antimony suppressor. However, the prior art reference teaches "the lignin acts as an antimony suppressor which reduces antimony poisoning within the battery" (page 4). Applicant states "the Examiner gives no authority to back up her

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accusation that there is no difference between grass and wood lignins”. However, Applicant gives no authority to back up the assertion that there is necessarily a difference between grass and wood lignins. Furthermore, Examiner did not state there is no difference between grass and wood lignins, but required Applicant to show that lignins produced from grass sources are necessarily different chemically/structurally from lignins produced from wood sources. The five articles contained in the appendix of the Brief do not support there is necessarily a difference between grass and wood lignins.

Even if the term “grass lignin” is not treated as a product-by-process limitation, Navarrete still discloses the invention. The reference discusses grass lignins, softwood lignins and hardwood lignins. Thus, Navarrete teaches grass lignins. Examiner now points to claim 1 of the prior art reference that recites “A battery separator for lead acid batteries comprising: a microporous membrane including an ultra high molecular weight polyethylene, a filler, a processing oil, and a lignin.” Claim 2 of the prior art reference recites the “separator of claim 1 wherein said lignins being selected from the group consisting of softwood lignins, hardwood lignins, and mixtures thereof”. In order for claim 2 to be further limiting claim 1, claim 1 must encompass grass lignins. Furthermore, claim 1 broadly claims “a lignin”, which encompasses all lignins known at the time of invention of Navarrete. Navarrete clearly teaches grass lignins were known at the time of invention.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




**TRACY DOVE**  
**PRIMARY EXAMINER**

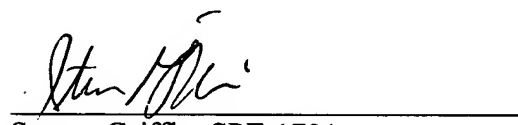
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November 1, 2005

Conferees:



Patrick Ryan, SPE 1745



Steven Griffin, SPE 1731